UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/877,744	06/08/2001	On-Kwok Victor Li	9661-0019	5203

			EXAMINER
7590	02/24/2006		COULTER, KENNETH R

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ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Office Action Summary	Application No.	Applicant(s)
		09/877,744	LI ET AL.
		Examiner	Art Unit
		Kenneth R. Coulter	2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/30/05 (request for RCE)*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 9-19* is/are rejected.

7)☒ Claim(s) *8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or
in public use or on sale in this country, more than one year prior to the date of application for
patent in the United States.

2.   Claims 1 – 7 and 9 – 19 are rejected under 35 U.S.C. 102(b) as being anticipated

by Law (U.S. Pat. No. 5,875,190) (Asynchronous Transfer Mode Switching System).

2.1   Regarding claim 1, Law discloses a method for assigning an address to a node in

a network having an arbitrary topology (col. 6, lines 29 – 34 "**arbitrary distribution**

network"), the method comprising:

providing a first address to a first node such that the first address includes a

description of a path to the first node (Figs. 2, 3, 4; col. 3, lines 53 – 60; col. 5, lines 47 –

52; col. 8, lines 6 - 21)

establishing a mapping between plurality of output ports in the network and bits

in the first address such that a packet, directed to the first address, at a second node in

the network is forwarded via an output port on the second node in the network, in

response to a specified bit in the first address having a specified value (Fig. 4; Abstract

"The distribution network *may* be of a radix-r tree configuration in which multicast

elements reference an extra cell header which identifies the output links of a multicast elements to which a data packet is to be transferred."; col. 5, lines 47 – 55 "The arriving packets each include a **packet header** that includes an **address field** and a priority field. The address field, ... indicates **which of the output ports** 201 to 20N the packet is **destined for.**"; col. 5, line 66 – col. 6, line 9; col. 8, lines 6 – 67 "The **distribution networks 131 to 13N use a** *self-routing addressing* **scheme** and decentralized control."; col. 6, line 54 – col. 7, line 5 "The distribution network 13i is **self-routing** ...").

2.2   Per claim 2, Law teaches the method of claim 1 wherein the network is an *optical* network (col. 12, lines 15 - 28).

2.3   Regarding claim 3, Law discloses the method of claim 1 wherein at least one node in the network has more than one address (col. 8, lines 6 - 21).

2.4   Per claim 4, Law teaches the method of claim 1 wherein concurrent bits in the first address map to output ports on the second node (Figs. 3, 4; col. 8, lines 6 - 21).

2.5   Regarding claim 5, Law discloses the method of claim 4 wherein the map is a one-to-one correspondence (Figs. 3, 4; col. 8, lines 6 - 21).

2.6   Per claim 6, Law teaches the method of claim 4 wherein each of the output ports on the second node maps to a bit in the concurrent bits in the first address (Figs. 3, 4;

col. 8, lines 6 - 21).

2.7   Regarding claim 7, Law discloses the method of claim 1 further including

associating an output port in a node to an unused bit in a sub-field corresponding to the

node in an address such that in response to a new address for directing a packet to a

node in the network, the packet is forwarded via the output port (Fig. 4; col. 7, lines 41 –

46; col. 8, lines 6 – 21; col. 1, lines 5 – 10 "modular core **switch fabric that is self-**

routing, expandable..."; col. 14, lines 52 – 55 "simple augmentation methods used to

expand the distribution network 13i ...")

2.8   Per claims 9 – 19, the rejection of claims 1 – 7 under 35 USC 102(b) (paragraphs

2.1 – 2.7 above) applies fully.

Allowable Subject Matter

3.   Claim 8 is objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

Response to Arguments

4.   Applicant's arguments filed 10/3/05 have been fully considered but they are not

persuasive.

Applicant argues that Law (U.S. Pat. No. 5,875,190) "does not disclose the network

having an arbitrary topology or the self-routing address scheme as claimed. For

example, Law does not disclose 'establishing a mapping between a plurality of output

ports in the network and bits in the first address." (Remarks on 10/3/05 (remarks

section); p. 6/9, paragraph 7)

Examiner disagrees.

Law clearly teaches an "**arbitrary distribution network**" (col. 6, line 30).

Applicant teaches that the present invention is directed to "a method and system for

assigning self-routing addresses to nodes in a network with **arbitrary, including**

irregular, topology is provided." (Abstract, lines 1 – 3).

Applicant's invention is directed to an arbitrary topological network.

Also, Applicant teaches that "most practical networks exhibit irregular (arbitrary)

topologies." (paragraph 25, line 7).

Therefore, a practical application of the Law reference would most likely exhibit

"irregular topologies."

In addition, Law teaches a "modular core **switch fabric that is self-routing,**

expandable..." (col. 1, lines 5 – 10) and "simple augmentation methods used to

expand the distribution network 13i ..." (col. 14, lines 52 – 55) implying an arbitrary

topology.

Law clearly teaches a self-routing address scheme including "establishing a mapping

between a plurality of output ports in the network and bits in the first address." (Fig. 4;

col. 5, lines 47 – 55 "The arriving packets each include a **packet header** that includes

an **address field** and a priority field. The address field, ... indicates **which of the**

output ports 201 to 20N the packet is **destined for**."; col. 5, line 66 – col. 6, line 9; col.

8, lines 6 – 67 "The **distribution networks 131 to 13N use a** *self-routing addressing*

scheme and decentralized control."; col. 6, line 54 – col. 7, line 5 "The distribution

network 13i is **self-routing** ...").

Applicant argues that Law only represents a radix-r network.

Examiner disagrees.

Law clearly discloses different network configurations (Abstract "The distribution

network *may* be of a **radix-r tree configuration** in which multicast elements reference

an extra cell header which identifies the output links of a multicast elements to which a

data packet is to be transferred.").

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Fukumoto et al.   (U.S. Pat. No. 6,775,706)   Multi-Protocol Switching System,

Line Interface and Multi-Protocol Processing Device

A self-routing switching system that implements port numbers in the address

scheme (see Abstract; Figs. 4, 5; col. 5, line 66 – col. 6, line 15).

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kenneth R. Coulter whose telephone number is 571

272-3879. The examiner can normally be reached on 5 4 9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Rupal Dharia can be reached on 571 272-3880. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

krc

KENNETH W. CHU
PRIMARY EXAMINER

Kenneth Coulter